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WATER SUPPLY OUTLOOK

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

for

IDAHO

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and

IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

JUNE 1, 1965

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W./Broadway - Room 507, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
VESTERN UNITED STATES.	_ MONTHLY (FEBMAY)_	PORTLAND. OREGON	_ ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	_ ALL COOPERATORS
STATES			i e
ALASKA	MONTHLY (MARMAY)	PALMER, ALASKA	ALASKA S.C.D.
AR I ZON A	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
Colorado and New México	MONTHLY (FEBMAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JANJUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NE VADA	MONTHLY (JANMAY)_	RENO, NEVADA	— NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
ORE GON	MOLTHLY (JANJUNE)	PORTLAND. OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JANJUNE)	SALT LAKE CITY, UTAH _	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB. JUNE)	SPOKANE. WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEBJUNE)_	CASPER. WYOMING	WYOMING STATE ENGINEER
	PUBLISHED	BY OTHER AGENCIES	
REPORTS	ISSUED		AGENCY
BRITISH COLUMBIA	MONTHLY (FEBJUNE)_	WATER RESOURC FOREST AND WATE VICTORIA, B.C.,	ES SERVICE, DEPT. OF LANDS, ER RESOURCES, PARLIAMENT BLDG., CANADA
CALIFORNIA		CALIF. DEPT. OF SACRAMENTO, CAL	WATER RESOURCES, P.O. Box 388,

WATER SUPPLY OUTLOOK

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for

IDAHO

Report prepared by

MORLAN W. NELSON Snow Survey Supervisor

and

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SOIL CONSERVATION SERVICE SNOW SURVEY SECTION P.O. BOX 38, BOISE, IDAHO 83701

Issued by

LEE T. MORGAN

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
BOISE, IDAHO

CARL E. TAPPAN
STATE RECLAMATION ENGINEER
DEPARTMENT OF RECLAMATION
BOISE, IDAHO



WATER SUPPLY OUTLOOK for IDAHO







JUNE 1, 1965 SNOW SURVEYS AND SUPPLEMENTAL MEASUREMENTS

Snow surveys made near the first of June indicate an even, delayed snow melt has occurred for the 1965 season. The delayed snow melt, characterized by warm days and cool nights, resulted in some rivers or streams flowing at flood stage for several weeks up through the first of June. Peak flows on many rivers, such as the main stem of the Snake River, the Big Lost, Big Wood and Boise Rivers, apparently are going to occur in the month of June as all of these rivers were continuing to rise near the end of May. The high elevation snow courses throughout the southern half of the state still have an unusually heavy snow pack.

The extremely heavy volumes of water forecast for many rivers is apparently developing, with estimates of flow indicating that forecast errors will average between 3% and 10%.

The supplemental measurements carried in this report are to complete the files of those using the data.



SNOW			CURRENT INFORMATION			PAST RECORD		
DRAINAGE BASIN and SNOW	COURSE No.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (inches)	WATER CON-	AVERAGE b	
				1	· · · · · · · · · · · · · · · · · · ·	1	1	
	JUNE	1, 196	5 MEASU	JREMENTS				
Benton Spring	16A3	4900	6/1	0	0.0			
Big Creek Summit	15 E2	6608	6/4	42	22.2	18.9		
Bogus Basin	16 F2	6120	5/28	21	10.9	3.2		
Coolwater Mountain	15 C 7	6200	5/29	22	12.1	29.5		
Crater Meadows	15C9	6100	5/27	63	39.8	48.4		
Darby Canyon (A)	10 F2 1	8250	5/27	32	16.1			
Elk Butte	16C15	5550	5/27	T	T	28.0		
Galena Summit	14F12	8795	6/6	50	27.1	14.7		
Goat Lake	14C9	6600	5/27	94	48.9	48.2		
Granite Peak	15B13	6000	5/27	71	36.6	42.0	-	
Hemlock Butte	15C6	5500	5/27	71	37.1	57.6		
Lookout	15B2	5250	5/28	30	14.8	28.4		
Lost Lake	15B14	6000	5/27	112	59.4	69.0		
Medicine Ridge	15B4	6150	5/27	78	40.6	43.6		
Moores Creek Summit	15F1	6100	6/3	35	18.0	8.8	-	
Orogrande Mountain	15D4	7800	5/29	110	58.1	46.6		
Schweitzer Bowl	16A6	4500	5/28	0	0.0			
Schweitzer Ridge	16A5	6100	5/28	78	39.3			
Teton Pass	10F13	8500	5/26	68	34.2			
Trinity Mountain	15F5	7400	6/2	83	49.4	400 400		
,								
	SUPE	LEMENTA	AL MEASI	JREMENTS	-			
DECEMBER 1, 1964								
Boulder Creek	16D1	5500	11/30	20	4.6	4.3	***	
Crumarine Creek	16C6	3500	11/28	8	1.2	0.0		
East Twin	16C3	4000	11/28	10	1.7	T	900 900	
Howard Creek	16C5	3500	11/28		1.0	0.0		
Moscow Mountain	16C2	4800	11/28		2.1	2.1		
Pierce Rgr. Sta.	15C5	3170	11/27		0.9	0.0		
West Twin	16C4	4200	11/28		1.5	0.0	-	
DECEMBER 15, 1964			ŕ					
Pierce Rgr. Sta.	15 C5	3170	12/15	21	4.2	3.6		
·	1505	3170	12/13	4. 1	-7 \$ 6m	3.0		
JANUARY 15, 1965								
Above Greer	16C11	1240	1/15	8	2.2	T		
Atlanta Summit (A)	15F4	7500	1/13	113	40.7	14.5		
Bad Bear	15F2	5500	1/15	42	13.4	6.6		
Greer Summit	16C13	3000	1/15	10	2.6	1.6		
Midway	16C12	2200	1/15	8	1.9	T	400 48N	
Moores Creek Summit	15F1	6100	1/15	80	28.8	14.2	***	
Mount Baldy	14F9	9000	1/18	84	29.4	8.2	-	
Pierce Rgr. Sta.	15C5	3170	1/15	31	8.6		900 900	
_	15F5	7400	1/13	115	41.4	14.8		

SHOW			CURRENT INFORMATION PAST RECORD				
DRAINAGE BASIN and SNOW			DATE OF	SNOW DEPTH (Inches)	WATER CONTENT	WATER CONTEN	VERAGE b
NAME	NO. E	LEVATION	SURVEY	(inches)	(Inches)	LAST TEAR	YERAUL
FEBRUARY 1, 1965							
I II II I I I I I I I I I I I I I I I							
Dry Basin (A)	11G14	7900	2/7	104	37.8	16.0	
Horseshoe Basin (A)	11G15	8000	2/7	85	30.9	14.0	
Liberty Spring (A)	11G13	8600	2/7	120	46.8		
Road Creek	15 F3	5400	2/7	39	13.0	8.4	7.8*
FEBRUARY 15, 1965							
Atlanta Summit (A)	15F4	7500	2/17	121	48.4	22.6	
Bad Bear	15F2	5500	2/15	65	20.3	11.8	400 440
Boulder Creek	16D1	5500	2/16	89	30.8		
Brundage Mountain	16D6	7700	2/17	149	60.3	000 000	
Galena	14F1	7500	2/17	82	30.4	13.8	also see
Galena Summit	14F12	8795	2/17	94	34.7	16.8	
Graham Ranch	14F5	6200	2/16	60	21.0	site spe	***
Moores Creek Summit	15F1	6100	2/15	114	40.9	22.6	
Mount Baldy	14F9	9000	2/16	86	32.2	13.9	
Pierce Rgr. Sta.	15C5	3170	2/15	43	13.3	11.3	
Prairie	15F6	5600	2/14	21	3.8	W0 400	
Road Creek (A)	15F3	5400	2/17	37	13.0		
Trinity Mountain (A)	15F5	7400	2/17	140	56.0	24.4	
MARCH 15, 1965							
Atlanta Summit (A)	15 F4	7500	3/15	115	48.0	35.2	400 000
Bad Bear	15F2	5500	3/15	50	20.3	17.1	
Bogus Basin	16 F2	6120	3/16	76	29.5	20.9	***
Bogus Basin Road	16F4	5360	3/16	3	1.6	11.1	500 -401
Fourth of July Summit	16B3	3100	3/15	25	9.1	17.1	
Galena	14F1	7300	3/15	77	31.8	18.4	40 40
Galena Summit	14F12	8795	3/15	93	38.8		
Lookout	15B2	5250	3/13	105	41.0		36.5
Lookout	15B2	5250	3/15	100	37.8		36.5
	15F1	6100	3/15	104	43.4		
Mount Baldy	14F9	9000	3/16			16.4	-
Pierce Rgr. Sta.	15C5	3170	3/15		12.4		679 day
Prairie	15F6	5600	3/15	T	T	7.7	es sa
Road Creek (A)	15F3	5400	3/15		13.3	22.2	
Sherwin Trinity Mountain (A)	16C1 15F5	3200 7400	3/13 3/15		66.7		
APRIL 15, 1965		, , , , ,	3, 2				
11211111 179 1707							
Atlanta Summit (A)	15F4	7500	4/12	128	50.3	34.6	
Atlanta Summit	15F4	7500	4/14	126	53.1	34.6	
Big Springs	11E9	6500	4/15		28.4		-
Bogus Basin	16 F2		4/14		31.8		an an
Couch Summit (A)	14F10					16.0	
Galena	14F1	7300	4/14	74	31.9	15.8	***

⁽b) 1948-62, 15 year period. * Not located directly on this drainage. * Estimated 1948-62, 15 year Average. (A) Aerial observation: Water content estimated.

APPENDIX 3

SNOW			CURRENT INFORMATION			PAST RECORD	
DRAINAGE BASIN and SNOW COURSE NAME NO. ELEVATION		DATE OF SNOW DEPTH WATER CONTENT			WATER CONTENT Loss		
		8795	1	103	41.4	25.0	
Galena Summit	14F12 11E10	6315	4/13 4/15	49	20.8	13.1	
Island Park	15B2	5250	4/15	92	39.7	41.2	
Lookout	15B2 15F1	6100	4/15	106	46.0	30.8	
Moores Creek Summit	14F9	9000	4/13	100	37.8	20.1	
Mount Baldy Pierce Rgr. Sta.	15C5	3170	4/15	21	8.5	13.1	
Road Creek (A)	15F3	5400	4/12	29	10.2	13.1	
Trinity Mountain (A)	15F5	7400	4/12	151	65.7	35.0	
Trinity Mountain	15F5	7400	4/14	145	67.4	35.0	
Valley View	11E8	6500	4/15	58	24.6	18.1	
•	1120	0300	7/ 13	30	21.0	10.1	
MAY 1, 1965							
Porcupine (A)	14F14	8350	5/7	75	35.0		
Swede Peak (A)	13F9	7500	5/7	53	24.8	14.7	
MAY 15, 1965							
	157	7500	F / 3 /	0.5	/ ~ 1	22 /	
Atlanta Summit (A)	15F4	7500	5/14	95	47.1	33.4	
Bogus Basin	16F2	6120	5/14	43	20.6	18.7	
Buck Meadows (A)	15D5	5600	5/9	48	22.1		
Cherry Creek Pass (A)	13F13	8900	5/8	11	5.1		
Coolwater Mountain	15C7	6200	5/9	68 3.5	30.5	47.4	
Copper Basin (A)	13F2 15C9	8000	5/8 5/8	35 98	16.3 54.8		
Crater Meadows	15E4	6100 7000	5/ 14	108	53.6		
Deadwood Summit (A) Elk Butte	16C15	5550	5/8	63	31.6		
Fish Lake Airstrip	15C2	5000	5/9	83	41.6	54.4	
Forty-nine Meadows	15B3	5000	5/8	41	20.2		
Galena	14F1	7300	5/14	42	21.2	7.2	
Galena Summit	14F12	8795	5/14	84	40.8	23.8	
Goat Lake	14C9	6600	5/9	117	59.0		
Granite Peak	15B13	6000	5/8	103	52.4	co ==	
Greenfield Flat (A)	16 E 7	7370	5/14	108	53.6		
Hemlock Butte	15C6	5500	5/8	117	59.7		
Jackson Peak (A)	15E9	7000	5/14	87	43.2		
Little Beaver	11G20	6970	5/13	T	T		
Lookout	15B2	5250	5/13	56	26.4	40.0	
Lost Lake	15B14	6000	5/8	138	70.9		
Lost-Wood Divide (A)	14F3	8750	5/8	69	32.2		
Moores Creek Summit	15F1	6100	5/14	72	35.7	24.2	
Mount Baldy	14F9	9000	5/12	85	37.9		
Mountain Meadows	15D6	6300	5/9	68	31.2		
North Fork Meadow (A)	14F15	8150	5/8	32	14.9	 	
Orogrande Mountain	15D4	7800	5/9 5/15	131	61.7	53.2	
Pierce Rgr. Sta.	15C5	3170	5/15 5/8	0	0.0		
Shanghai Summit Slickrock (A)	15C4 13F14	4600 8640	5/8	49 94	43.9		
Stickney Mill (A)	13F14 14F2	7500	5/8	27	12.6		
Teton Pass	10F13	8500	5/12	87	42.2		
Trinity Mountain (A)	15F5	7400	5/14	105	52.1	41.6	



Agencies Assisting with Snow Surveys, etc.

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests, and
Water Resources, British Columbia
Department of Resources and Development,
Water Resources Division

States:

Idaho State Reclamation Engineer
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

- U. S. Army Engineers
- U. S. Department of Agriculture
 Forest Service
 Agricultural Research Service
- U. S. Department of Commerce Weather Bureau
- U. S. Department of the Interior
 Bonneville Power Administration
 Bureau of Reclamation
 Fish and Wildlife Service
 Geological Survey
 Indian Service
 National Park Service
 Bureau of Land Management

PUBLIC UTILITIES

The Montana Power Company
Washington Water Power Company
Idaho Power Company
Utah Power and Light Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Boise Project Board of Control
Little Wood River Irrigation District
Jordan Valley Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Twin Lakes Irrigation Company
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control

PRIVATE CORPORATIONS

Amalgamated Sugar Company

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE P.O. BOX 38
BOISE, IDAHO 83701
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